

In re Appln. of Antrim et al
Application No 09/614,961 09/614,961

CLAIM AMENDMENTS

1. (Canceled):
2. (Currently amended): Method according to claim [1] 23, said method including a step of hydrogenating said mixture in the presence of a metal hydrogenation catalyst.
3. (Original): Method according to claim 2, said catalyst being a metal catalyst selected from the group consisting of platinum, palladium, ruthenium, rhodium, and activated nickel.
4. (Original): Method according to claim 3, said catalyst being activated nickel.
5. (Original): Method according to claim 4, said catalytic hydrogenation being performed at a temperature ranging from about 50° C to about 150° C.
6. (Original): Method according to claim 5, said catalytic hydrogenation being performed at a temperature ranging from about 100° C to about 130° C.
7. (Original): Method according to claim 6, said pressure ranging from about 1500 psi to about 3000 psi.
8. (Original): Method according to claim 6, said pressure ranging from about 1500 psi to about 2500 psi.
9. (Canceled):
10. (Currently amended): Process according to claim [9] 24, said catalyst being a metal catalyst selected from the group consisting of platinum, palladium, ruthenium, rhodium, and activated nickel.

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11. (Original): Process according to claim 10, said catalyst being a metal catalyst selected from the group consisting of platinum, palladium, ruthenium, rhodium, and activated nickel.

12. (Currently amended): Process according to claim [9], 24, said catalytic hydrogenation being performed at a pressure ranging from about 1500 psi to about 3000 psi.

13. (Currently amended): Process according to claim [9], 24, said pressure ranging from about 1500 psi to about 2500 psi.

14. (Currently amended): Process according to claim [9], 24, said pressure ranging from about 1500 psi to about 2000 psi.

15. (Cancelled)

16. (Currently amended): Method according to claim [48], 25, said pressure ranging from about 1500 psi to about 3000 psi.

17. (Currently amended): Method according to claim [48], 25 said pressure ranging from about 1500 psi to about 2500 psi.

18. (Currently amended): Method according to claim [48], 25 said pressure ranging from about 1500 psi to about 2000 psi.

19-22. (Cancelled):

23. (New): A method for reducing a mixture of a plurality of malto-oligosaccharide species to a dextrose equivalent (DE) of essentially zero, each of said malto-oligosaccharide species having a non zero DE resulting from the presence of a reducing end group on said malto-oligosaccharide species, said plurality of malto-oligosaccharide species differing at least in degree of polymerization (DP) value thus defining a DP

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profile for said mixture, at least about 40% of said malto-oligosaccharides in said mixture having a DP value greater than 10, said plurality of malto-oligosaccharides comprising a maltodextrin, said method comprising the steps of:

providing said malto-oligosaccharide mixture; and
catalytically hydrogenating said mixture under hydrogenation conditions suitable to substantially preserve the DP 1-8 profile of said mixture, said catalytic hydrogenation being preformed at a pressure of at least 1500 psi.

24. (New): Process for the reduction of a malto-oligosaccharides mixture, the process comprising of the step of:

providing a catalytic bed including a hydrogenation catalyst;
providing a malto-oligosaccharides mixture including a plurality of malto-oligosaccharides species, said plurality of malto-oligosaccharides species differing at least in DP value thus defining a DP profile for said mixture, each of said malto-oligosaccharides species having a non zero DE resulting from a presence of a reducing end group on said malto-oligosaccharides species, at least about 40% of said malto-oligosaccharides in said mixture having a DP value greater than 10, said plurality of malto-oligosaccharides comprising a maltodextrin;

continuously introducing said a malto-oligosaccharides mixture and hydrogen to said catalytic bed under hydrogenation conditions sufficient to catalytically hydrogenate said mixture to substantially reduce DE thereof, said conditions being suitable to substantially preserve the DP 1-8 profile of said mixture, said catalytic hydrogenation being performed at a pressure of at least about 1500 psi.

25. (New): Method for preparing a reduced malto-oligosaccharides comprising the steps of:

providing a starch;
hydrolyzing said starch to provide a mixture of malto-oligosaccharides species, said plurality of malto-oligosaccharides species differing in at least in DP value thus

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defining a DP profile for said mixture, each of said malto-oligosaccharides species having a non zero DE resulting from the presence of a reducing end group on said malto-oligosaccharides species, at least about 40% of said malto-oligosaccharides in said mixture having a DP value greater than 10, said plurality of malto-oligosaccharides comprising a maltodextrin; and

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Concluded

catalytically hydrogenating said malto-oligosaccharides species under hydrogenation conditions suitable to substantially preserve the DP 1-8 profile of said mixture and to substantially reduce the DE of said mixture, said catalytic hydrogenation being performed at a pressure of at least about 1500 psi.